

REMARKS

This is in response to the Office Action dated August 12, 2004.

In the Office Action the Examiner allowed numerous claims and also indicated that dependent claims 10, 11 and 32 would be allowable if placed in independent form. Claim 32 has been amended to be in independent form. Claims 10 and 11, dependent on claims 4 and 5, respectively, have been maintained dependent but, for reasons to be seen, are clearly further allowable in view of the allowability of claims 4 and 5, which have been amended to be in independent form.

- I. The Status Of The Various Sets Of Claims
Rejected Is Noted In The Following Sections A-D.

SECTIONS A-D STATUS OF CLAIMS

A. Claims 1-3 and 23 were rejected as anticipated by Frederiksen. Claim 1 has been amended and as such is clearly patentably distinguishable over Frederiksen for reasons to be discussed. Claims 2 and 3, dependent on claim 1, further patentably distinguish over Frederiksen. Claim 23, dependent on claim 1, has been cancelled without prejudice.

B. Claims 12-14, 17-19, 27, 30, 31, 33, 38-41, 43 and 44 were rejected as obvious over Frederiksen in view of Herman, et al.

Claims 12, 17, 18, 30, 31, 39 and 40 have been amended and as such are clearly patentable over the above references. Dependent claims 13, 14, 19, 41, 43 and 44 have not been amended but further patentably define their independent claims over the noted references.

Claims 27, 33 and 38 have been cancelled without prejudice.

C. Claims 4-6, 25, 34 and 42 were rejected over Frederiksen and Herman and

further in view of Felzer.

Each of the above claims has been amended and as such clearly patentably defines over the above noted references.

D. Claims 7 and 8, dependent on independent claim 1, have been rejected over Frederiksen in view of Seitz but are clearly allowable in view of the patentability of independent claim 1. As noted the use of a textured roughened surface (Cl. 7) and use of high density plastic (Cl. 8) is generally known but these features are added to further define one form of the unique modules of the present invention.

It should be noted that claim 51, dependent on claim 1, was apparently, inadvertently overlooked by the Examiner in the Office Action dated August 12, 2004. Claim 51 was added with the Second Amendment filed June 25, 2004 and is clearly allowable.

II. Relationship Of Numerous Features To The Various Claims

In prior Remarks, reference has been made to numerous elements, features and combinations not taught or suggested in the prior art relied upon in the rejection of numerous claims. It again is believed that it would be helpful to note the claims in which the numerous noted elements, features and combinations are found. This is set forth in the following Lists A-J.

LISTS A-J OF ELEMENTS AND FEATURES

A. "...an inclined ramp module having an upper support surface which is inclined for substantially its full engageable riding length ...".

See independent claims 1, 4, 5, 12, 17.

B. "...said inclined ramp module and said straight ramp module being of substantially the same length."

See independent claims 1, 4, 5, 17.

C. "... said end walls of said inclined ramp modules and said straight ramp modules -- have-- same transverse width and same vertical height ..."

See independent claim 1.

D. "...the width of said inclined ramp modules being no greater than the length of said straight ramp modules...".

See independent claim 1.

See dependent claim 18 (14).¹

E. "...at least one T-shaped protrusion and at least one T-shaped channel groove both integrally formed at said end wall of said inclined ramp module and on said end wall of said straight ramp module ...".

See independent claims 12, 17, 30 and 40.

See dependent claims 14 (13) and 43 (40).

F. "T-shaped protrusions of stacked ramps are vertically in line with separate attaching means engaging the inline T-shaped protrusions to secure the stacked ramps."

See independent claims 12, 17.

G. Hollow ramp modules with "T-shaped protrusions being generally hollow ...".

See independent claim 30.

H. "...contour of said upper support surface being substantially uniformly flat over its length including the area where said some of said flat ribs extend inwardly from the bottom of said inclined surface,...with substantially no distortion of said flat upper support surface".

See independent claims 4, 5, 31 and 34.

See dependent claims 6 (4), 18 (14), 19 (1), 25 (1), 39 (1), and 42 (41).

¹ The number in paranthesis following a dependent claim is the claim on which the claim is dependent.

I. "...said inclined ramp module adapted to be connected to said side wall of said straight ramp module for end-to-side alignment..."

See dependent claims 18 (14) and 39 (1).

J. "...said inclined upper surfaces of said inclined ramp modules (when one is stacked) are in angular alignment with substantially no gap between their adjacent ends..."

See claim 51 (1).

As noted numerous claims have been amended and in order to assist the Examiner in consideration of the claims the following outline may be of some assistance also in view of the Lists A-J.

III. Present Status Of The Claims

Independent claim 1 has been amended to include various features from claim 38, dependent on claim 1, and from independent claim 39, now cancelled without prejudice. The amendments to claim 1 further define the relatively equal sizes of the inclined and straight ramp modules and also notes that the width of the ramp modules is no greater than its length. Claims 2, 3, 7, 8, 19, 25, 39 and 51 are all dependent on claim 1 and further define over the references of record. Dependent claim 25 has been amended to further define the internal rib structure of the inclined ramp module which extends inwardly from the upper support surface with "substantially no distortion of said upper support surface." As will be seen this is totally unlike the vehicle lift of the Felzer patent.

Dependent claim 39 has been amended to define the end walls of the inclined and straight ramp modules "constructed" to be connected to the side walls of the straight ramp module for "end-to-side" alignment. In this regard the term "constructed"

has been used in place of “adapted” in response to the Examiner’s objection to “adapted”.

Claim 4, previously dependent on claim 1, has been amended to be in independent form and as such now includes the combination of claim 1 prior to the present amendment. Claim 4, however, has been further amended to define the upper support surface of the ramp as being “uniformly flat” and having a plurality of “generally flat internal ribs” extending across the bottom of the upper support “with substantially no distortion” of the upper support surface.

Claim 5, previously dependent on claim1, has also been amended to be in independent form and as such now includes the combination of claim 1 prior to its present amendment. Claim 5 has been further amended to define the upper support surface and ribs of the straight ramp module similar to that of the inclined module of Claim 4, i.e. whereby the ribs extend from the upper support surface “with substantially no distortion”.

Claim 6, dependent on claim 4, essentially adds the features of the straight ramp module of claim 5 for a combination with claim 4, i.e. ribs “with substantially no distortion” of the upper support surface.

Independent claim 12 has been amended to include a separate connecting means constructed to engage the attaching structure at the ends of the T-shaped protrusions of the stacked ramp modules to connect them in the stacked condition. This is clearly not shown in the prior art.

Claim 13, not amended, is dependent on claim 12 and further defines the second attachment means for connecting the modules in side-by-side alignment.

Claim 14, not amended, is dependent on claim 13 and further defines the second attachment means as being defined by a T-shaped protrusion and T-shaped channel groove.

Claim 17, previously dependent on claim 1, has been amended to be in independent form and as such now includes the combination of claim 1 prior to the present amendment. Claim 17 has been further amended to include a separate connecting means constructed to engage an attaching structure at the ends of the T-shaped protrusions of the stacked ramp modules to connect the modules in a stacked condition. This is clearly not shown in the prior art.

Claim 18 is dependent on claim 14 which in turn is dependent on claim 13 which is dependent on claim 12. Claim 18 defines the attachment means for connecting the ramp modules in “end-to-side” alignment. The combination defined by claim 18 is clearly not shown in the prior art.

Claim 19, dependent on claim 1, further defines the ramp system with a typical set of dimensions. This clearly is not shown in Frederiksen or any other reference.

Claim 25 is dependent on claim 1 and defines over the prior art and is amended to further define by the notation of the internal ribs extending inwardly from the upper support for surfaces of the ramps with substantially no distortion of these surfaces.

Independent claim 30 has been amended to define the inclined ramp module as being a hollow structure with the T-shaped protrusions having a generally hollow construction opening to the inside of the ramp while being closed at the top. Such structure is nowhere in the prior art.

Claim 31 has been amended to be in independent form and adds claim 30 prior

to its present amendment. Claim 31 has been further amended to define the inclined ramp module having ribs extending from the bottom side of the flat upper support surface with substantially no distortion of the upper support surface. The ribs provide support for the upper support surface and the end wall against the bottom side.

Claim 34, previously dependent on claim 33, has been amended to be in independent form and includes the combination of cancelled claim 33. Claim 34 has been further amended to include the ribs extending from the bottom of the support surface with substantially no distortion of the upper support surface.

Claim 39, dependent on claim 1, has been amended to define a connecting structure for “end-to-side” alignment.

Independent claim 40 has been amended to define the T-shaped protrusions and T-shaped channel groove as being of a reverse taper to provide a close fit at their bottom surfaces.

Claim 41, dependent on claim 40, defines the connecting means as being operable with the T-shaped protrusions for connecting straight modules when stacked.

Claim 42, dependent on claim 41 which is dependent on claim 40, defines the internal rib structure which supports the upper support surface with substantially no distortion.

Claim 43, dependent on claim 40, defines the T-shaped protrusion and T-shaped channel groove as being connectible for “end-to-end” connection.

Claim 44, dependent on claim 40, defines a straight ramp with a vertical height of a typical dimension.

Claim 51, dependent on claim 1, defines two inclined ramp modules which, when

in a stacked condition, are aligned with the inclined upper surfaces being in angular alignment with substantially no gap. As previously noted, the Examiner inadvertently did not comment on claim 51.

IV. Comparison Of The Construction Of
The Prior Art Relative To The Present Invention

Keeping the above notation re the various features in the claims, let us now look at the references of record and primarily those patents relied upon by the Examiner in the rejection of various ones of the claims. In this regard, it should be noted that none of the references relied upon define structures that are useable for forming a ramp system for providing aerial lift to users of rideable wheeled recreational products including skates, skateboards and bicycles. In addition none of the references teach or suggest the formation of ramp assemblies of selectively variable configurations for such use or of any other related type of use.

A. Frederiksen (Primary Reference)

As noted in the prior remarks, this reference (as well as the three other secondary references) is in no way related to ramp systems for providing aerial lift for users of rideable wheeled recreational products. Here the ramps are for wheelchairs primarily to facilitate movement over door thresholds (see page 1, line 5). As noted the ramp is constructed with a “ramp element 2” and “a tile element 4” which are both of very minimal heights to facilitate movement of a wheelchair over a door threshold. In this regard the typical height is noted as between 10-50 mm or 0.4-2.0 inches. The ramp structure of the present invention has modules (inclined and straight) of a substantially greater height, i.e. one example of a typical height being around 12 inches, which in a stacked condition would be around 24 inches. Clearly the Frederickson

structure would not utilize such a height and certainly could not provide aerial lift.

In Frederiksen the ramp 2 and tile element 4 are connected together end-to-end or side-by-side by separate coupling pieces 14 in cut-outs 12. In the present invention the end-to-end and side-by-side connections are made by integrally formed T-shaped projections and T-shaped grooves which can be selectively interconnected. This facilitates assembly and disassembly and mobility of the system.

In this regard, it can be seen that the T-shaped projections and grooves facilitate securing the ramps together over a more evenly distributed area. Whereas Frederiksen provides securement over a limited section at the bottom of the modules.

In this regard, it should also be noted that the T-shaped projections and grooves facilitate connection of the ramp modules together in a stacked condition. The totally different connecting structure of Frederiksen does not even remotely provide or suggest such structure.

For stacking, Frederiksen uses dowels 18, 18' in lined up holes 16. Here the dowels are inserted with a "snap-lock" and can be removed by "drilling out" through the "head parts 20". (See pg. 7, lines 18-26). Also the stacked members then could be separated by being broken up apparently by fracturing the dowels. Alternatively the stacked members can be connected by removable screw connections instead of dowels. Clearly these structures do not facilitate the relatively direct and convenient way of assembly and disassembly, without damage, of the modules as taught in the present invention.

In this regard, the Examiner has cited the patent to Benson as teaching the use of protrusions and grooves which are interengageable for connecting a flat base 12 and

inclined ramp element 50 together for a modular cable or hose protection system. But clearly the use of such structure would be contrary to the clear teaching of Frederiksen.

The use of “protrusions” for connection would create gaps with the thresholds and thus is completely contrary to the teaching of Frederiksen. Clearly Frederiksen avoids gaps between the ramp elements and the threshold to be crossed. For example see the discussion at page 2, lines 27-30:

“With more lasting arrangements, such as in the home of the user, it will be undesirable for the formation of gaps to arise between the ramp elements and the edges of the thresholds as a consequence of the said customary floor lists,...

Clearly integrally formed T-shaped grooves and protrusions, resulting in gaps, would not work with Frederiksen’s assembly of Figure 5 and certainly not that of Figure 6.

On another point, it is clear that Frederiksen’s ramps 2 are not inclined substantially over the full engageable length. Enclosed is an enlarged copy of Figure 4 with size designations La-Ld for the different sections. While dimensions were not found in the specification and cannot be arbitrarily assumed a rough measurement of the drawings would roughly show that the flat portion Ld at the end of the top of the ramp 2 would extend for around 20% of the overall length La of the upper surface. When stacked, as in Figs. 3 and 4, the lower end of the ramp 2 would extend partially over the flat portion. But this would still leave a flat portion Lc of at least around 10% of the overall length being flat. In addition the inclined surfaces of the two inclined ramps 2, when one is stacked, would be offset from each other with a parallel angular gap. In the present invention no such significant gap exists, see Fig. 1. The Frederiksen structure would result in a significant angular gap.

It also appears that the flat portion on the end of the inclined ramp is used to facilitate fastening to an overlying element. See page 7, lines 1-7. In addition it would appear that the flat portion also would provide a desirable transition from the inclined ramp portion to the adjacent threshold etc. See claim 8 of the corresponding U.S. Patent No. 6,718,588.

In this regard, your attention is directed to the notation in certain of the claims as follows:

“an inclined ramp module having an upper support surface which is inclined for substantially its full engageable riding length....”.

In addition to the above, the plurality of through holes 16 in Frederiksen would appear to provide a surface which could be irregular and could be potentially subject to wear if certain recreational products where used.

Clearly then the Frederiksen reference is inapplicable to applicants' ramp assemblies for providing aerial lift for rideable wheeled recreational products.

It should also be noted that in the present invention the lengths of the straight and inclined modules are substantially equal. Clearly this is not the case in Frederiksen. Such structure in the present invention facilitates the formation of modular structures of varying configurations. See the language in some of the claims:

“said inclined ramp module and said straight ramp module being of substantially the same length”.

Also note some of the claims as listing typical dimensions of that feature.

Also in the present invention it is possible to provide a ramp assembly with the end of the inclined ramp connected to a side of the straight ramp for end-to-side connection and also an end of a straight ramp for end-to-side connection with another

straight ramp. This is noted in some of the claims and notes the substantial variety of ramp assemblies of selectively variable configurations with the present invention. Clearly this cannot be done in Frederiksen where the width of the modules is substantially greater than the length.

In this regard it can be seen that Frederiksen and Herman both show structures where the width of the modules is substantially greater than the length. It is clear that with such structures to create a ramp assembly to provide aerial lift for wheeled recreational products with the necessary vertical height and length would result in modules of impracticably large sizes and weight.

Let us now look to each of the secondary references.

B. Herman et al (Secondary Reference)

The Herman patent is directed to special ramp constructions for protection of cables, hoses, etc. The modules are not hollow, one piece structures open at the bottom. The straight module 10 is designed with transverse channels or openings 34 through which cables, hoses, etc. can pass. The straight module includes a hinged upper cover plate to cover the channels and also to facilitate insertion of the cables, hoses, etc. On the other hand the inclined ramp 50 is apparently of a solid, one piece structure and is not hollow! In addition the width of the ramps are considerably greater than the length. Thus they cannot be connected end-to-side. The length of the inclined ramp is greater than the length of the straight ramp in Figs. 1-3 and thus do not facilitate stacking. However, even in Figs. 4-6 there is no provision or suggestion for stacking. Thus they cannot effectively stack the modules. Clearly Herman is directed to a limited versatility of combinations – limited to cable, hose, etc. protection. There is not really an

open hollow construction where internal ribs extend from the riding surface to the ground. Such hollow construction in the present invention facilitates manufacture and also provides modules of generally much lower weights than solid modules.

C. Felzer

The Felzer patent was cited as showing a hollow ramp structure with a plurality of channels. This was cited by the Examiner in response to those claims which include reference to internal ribs.

First of all, Felzer is directed to an entirely different ramp structure for an entirely different purpose from the present invention as well as from Frederiksen.

The Felzer ramp is for a "Vehicle Lift" to provide a "drive-on type lift" for vehicles such as "an automobile or truck". Here the upper "inclined surface" is provided with a top wall 21 having a deep "wheel-receiving recess 21b". At the same time the hollow structure includes a bottom wall 15 which facilitates its use as a tool box.

There is no straight ramp for stacking or for in line connection. While hollow – the so called "ribs" are actually "spaced channels 30" which deliberately form significant arcuate indents in the inclined surface and the upper top wall 21. But, as noted, the ramp is not open on the bottom. The side spaced channels 30 are on the side walls and do not appear to extend for the full height. More importantly there are no internal ribs extending from the bottom of the upper inclined surface to the ground to provide support. The spaced channels 30 in the upper inclined surface extend for the full width and thus provide significant discontinuity in the upper surface to totally negate its use for aerial lift.

On another note, the present invention has spaced side and end T-shaped

grooves and protrusions for interconnection. These could be considered similar to the side channels 30 in Felzer for providing support for the upper surface! Yet the present invention also has separate internal ribs to provide support to the upper support surface. The ribs are in the claims in addition to the T-shaped grooves and protrusions.

Clearly the upper, top wall (riding surface) of Felzer is not uniformly inclined but it has arcuate indents created by “spaced channels 30”, and also has a deep, elongated “wheel – receiving recess 21b” and a rounded crown like “back end portion 21a”

The Examiner relies upon Felzer at Col. 2, lines 14-30 which states:

“I find that by providing inwardly embossed longitudinally spaced channels 30 which extend across the top wall 21 and thence downwardly of the side walls to the bottom edge thereof, I am able to use relatively light gauge metal without any interior bracing whatsoever, such particular arrangement of channeling not only preventing collapse of the side walls under the weight of a vehicle but also preventing the top wall from bending inwardly under such weight, which bending would cause the side walls to be drawn towards each other at their top ends.

With the foregoing described construction I am able to leave the interior of the device entirely unobstructed by bracing and the like, so that it may be used to contain tire tools, and the like.”

In complete contrast the ribs of the present invention are there to provide “interior bracing” and are not extensions of the T-shaped grooves and protrusions.

Clearly then the Felzer patent is totally different from the present invention and also from the internal thin rib structure of the present invention as noted in the claims: 4-6, 25, 31, 34 and 42.

Clearly Felzer is totally different from the inclined module ramps of the present invention and from its selective assembly for aerial lift. In this regard it is obvious that Felzer has no straight ramp!

In addition there is no means for attachment of the Felzer ramps – end-to-end, -

side-to-side, end-to-side – or stacked! In fact the construction is not capable of such attachments! While here the width is substantially smaller than the length – it still would not accommodate end-to-side connection or even side-by-side connection.

Clearly then Felzer is not related to the present invention nor is it related to the primary reference Frederiksen.

In this regard numerous of the claims have been amended to note that the:

“contour of said upper support surface being substantially uniformly flat over its length”, ---- with ribs “across the bottom of said flat upper support surface with substantially no distortion of said flat upper support surface.

D. Seitz

This patent is directed to a ramp assembly for wheelchairs or wheeled carts. Here all of the ramps are of a different size and adapted to be connected end-to-front to gradually increase the height.

Here also the separate ramp modules are connected together by threaded bolts 56 in couplings 51-55, etc. and screws 58 through upper surfaces. This is totally different than applicants’ structure as well as that of Frederiksen.

However, the Seitz patent was cited primarily as disclosing surface grooves 29 to provide anti-skid characteristics. In this regard, it has been previously noted and is acknowledged that it is known in the art to provide suitable non-skid surfaces and also to make components from various forms of plastic. However, it is again submitted that claims 7 and 8 add these features to the unique combinations of elements in claim 1.

It should be noted that the amendments made to numerous claims is being done without prejudice or restriction as to the scope of the amended claims or of the non-

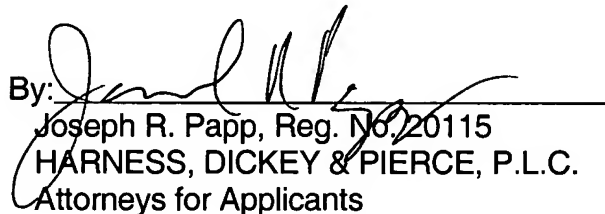
amended claims.

In view of the above it is submitted that all of the claims are allowable and that this application is now in condition for allowance.

On another note, the Examiner's candor and dedication to withdrawing the prior final rejection is respectfully acknowledged.

Thus if the Examiner has any further questions about the allowability of any or all of the claims or any other matters, the Examiner is respectfully requested to call counsel for applicants prior to issuance of any further action in order to expedite further proceeding of this application. In this regard, if the Examiner would require any information on a claim by claim bases to assist in further evaluation, counsel for application will cooperation to the fullest extent.

Respectfully submitted,

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